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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/632,634

07/31/2003

Michael A. Pate

200209409-1

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03/10/2006

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EXAMINER

CRUZ, MAGDA

ART UNIT

PAPER NUMBER

2851

DATE MAILED: 03/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/632,634

Applicant(s)

PATE ET AL.

Examiner

Magda Cruz

Art Unit

2851

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 7, 9-14, 38 and 42-45 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9-12 and 42-45 is/are allowed.
- 6) ☒ Claim(s) 1-5, 7, 13, 14 and 38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-5, 7, 13-14 and 38 are rejected under 35 U.S.C. 102(e) as being anticipated by Butterworth.

The applied reference has a common assignee with the instant application.

Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Butterworth (US Patent Number 6,624,756 B1) discloses:

- Regarding claim 1, a spatial light modulator (Figure 11, element 40) having an array of modulating elements (Figure 11, elements 113, 117, 111, 30, 121, 107 and 115) forming a plurality of image regions (Figure 12, element 30): a light generator (Figure 11, element 10) configured to direct

a different one of a plurality of light bands onto each of the plurality of image regions (column 10, lines 37-42); and a controller (Figure 14, element 109) including a spatial image separator (Figure 14, element 150) configured to assign received image information to a corresponding one of the image regions, the controller (Figure 14, element 109) being configured to control modulator of the spatial light modulator (Figure 14, element 40) appropriate to produce a separate image in each image region (column 7, lines 32-35).

- Regarding claim 2, the plurality of light bands includes at least one of a red light band, a green light band, and a blue light band (column 5, lines 38-39).
- Regarding claim 3, the light generator (Figure 11, element 10) is configured to direct the plurality of bands of light onto image regions having at least one aligned edge (column 14, lines 14-15 and 21-22; i.e. light illuminating the pixellated electrode, which is divided in square regions/image regions).
- Regarding claim 4, the image regions (Figure 12, element 30) are of the same size.
- Regarding claim 5, the array of modulating elements (Figure 11, elements 113, 117, 111, 30, 121, 107 and 115) has a generally rectangular shape with adjacent sides having relative sizes, and the image regions have generally rectangular shapes with adjacent sides having relative sizes

different than the relative sizes of the array of modulating elements (column 9, lines 34-39).

- Regarding claim 7, the light bands are of different colors (i.e. red, green and blue), and the controller (Figure 11, element 109) is configured to control modulation of the spatial light modulator (Figure 11, element 40) appropriate to produce differently colored component images of a composite image (column 12, lines 9-12 and 24-28).
- Regarding claim 13, a light source (Figure 14, element 10) configured to produce multi-spectral light; a spatial light modulator (Figure 14, element 40) configured to modulate light received in a plurality of regions according to component images of a received composites image; an optical separator (Figure 14, element 150) configured to separate multi-spectral light into a plurality of colored light bands, and to direct the light bands onto the regions of the spatial light modulator (Figure 14, element 40); an optical combiner (Figure 14, element 105) configured to combine the modulated light bands into a composite light band; and a controller (Figure 14, element 109) configured to control modulation of the spatial light modulator (Figure 14, element 40) appropriate to produce differently colored multi-pixel component images of a multi-pixel composite image, the controller including a spatial image separator (Figure 14, element 150) configured to assign received image information to a corresponding one of the image regions based on color.

- Regarding claim 14, projection optics (Figure 14, elements 14 and 16) configured to direct the composite light band toward a display medium (i.e. light valve system).
- Regarding claim 38, a spatial light modulator (Figure 11, element 40) having an array of modulating elements (Figure 11, elements 113, 117, 111, 30, 121, 107 and 115) configured to spatially modulate incident light; and a controller (Figure 14, element 109) configured to control modulation of the spatial light modulator (Figure 14, element 40) appropriate to produce a differently colored multi-pixel component image, in each of a plurality of separate image regions of the array of modulating elements according to received image information, the multi-pixel component images corresponding to images of different colors that when combined form a multi-pixel composite color image (column 12, lines 9-28), where the controller (Figure 14, element 109) further includes a spatial image separator (Figure 14, element 150) configured to assign received image information to a corresponding one of the image regions to produce a corresponding multi-pixel component image in the image region (Figure 12, element 113).

Allowable Subject Matter

3. Claims 9-12 and 42-45 are allowed.

Response to Arguments

4. Applicant's arguments with respect to claims 1-5, 7, 13-14 and 38 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Magda Cruz whose telephone number is (571) 272-2114. The examiner can normally be reached on Monday through Thursday 8:00-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on (571) 272-2258. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Magda Cruz
Patent Examiner

March 4, 2006



William Perkey
Primary Examiner